

## **Descriptive Study of the Training Needs for Men and Women Farmers in Semi Desert Areas a Case Study of South Jordan**

*A.N.H. Al - Shadiadeh*

Faculty of Agriculture, Mu'tah University, Jordan

---

**Abstract:** This study aimed at specifying the training needs for men and women farmers in semi-desert areas in south of Jordan. The study has been conducted on a sample of (80) male and female farmers. The data of this study was collected from through questionnaire prepared by the researcher. The questionnaire composed of two parts; one for personal characteristics and, the second, information from their job. The questionnaires were shown to a number of experts and arbitrators to assure usefulness and efficiency, as well as the coefficient of validity and reliability for some variables in the study. Then the information's were collected during the period (April to the end of June, 2005). For assessment of needs, calculated the average for training needs from through given degrees, were (3) degrees for high need, (2) degrees for medium need, (1) degree for low need and (0) for no need. The data analyzed using the statistical program for social science (S.P.S.S). The most important findings of study are: 1- The animal production field came at the first rank followed by bee keeping and lastly the plant production field for male farmers while female farmers rank the plant production as the highest priority field for training followed by bee keeping and animal production is the third priority while food processing became the last priority for training. 2- With respect to training needs in plant production field, the training in vegetables production was the priority of female farmers followed by field crops then fruit trees. While for male farmers the fruit trees ranked firstly followed by vegetables and the field crops were in the last priority. 3- Regarding the priorities of training in animal production field, the poultry came first followed by cattle then the sheep for male farmers. While female farmers have priorities were, sheep is the first priority followed by poultry and the cattle came as last priority for them. On the light of study's conclusions, the researcher wants to raise the following recommendations: 1- more attention should be paid for applying more extension programs for male and female farmers in the fields of this study and according to its results. 2- The training center in Extension Administration for Ministry of Agriculture should develop practical, workable and scientific plan building on the results of this study and according to the resulted needs to cover these needs. 3- More regular field surveys aiming at specifying the needs of male and female farmers for different training programs before planning the training and extension activities. These training should aim to fulfill their needs. 4- The Extension Administration in the Ministry should provide the necessary extension workers especially in the fields of animal, plant production and food processing. 5- The Extension Administration might adopt the approach that suggested in this study, which considers being appropriate for those specific regions after good training for extension workers on planning, applying and evaluation of extension programs.

**Key words:** Agricultural extension • Training needs • Jordan

---

### **INTRODUCTION**

The planned programs for socio- economic development represent the new trend that most of the countries have adopted to modernize their societies, however, most of the planners for the required development have paid more attention toward achievements on the economic aspects rather than human

development achievements. This might highlight the importance of extension and training for farmers as these means play major role building the farmers capacities, raising their awareness and providing them with modern knowledge aiming at enhancing their performance to achieve their ultimate goal of development.

Despite all efforts in this field from all development agencies, still the extension and training program suffer

many deficiencies that seem to be necessary to achieve the planned goals. These goals will reflect their results on the performance and skills of farmers in the related fields. One of the critical factor is the: absence of definite specification for the needs of target groups from their perspective that affects their activities and field of work and an appropriate extension approach that had been used. This considers from the important basis that should be taken in consideration in order the programs will achieve their goals [1].

Building on these difficulties and constraints the researcher conducted this study to identify the training needs for the farmers in the desert- and to find out the proper extension approach that might meet their needs.

**Importance of the study:** The needs assessment for extension and training is the base for extension process and its activities so, determining these needs in different agricultural fields such as plant production, animal production, food processing and bee keeping with all its different aspects considers an important step in planning the appropriate interventions that aiming at building farmers capacity and consequently achieving the development objectives.

All interventions that do not take these needs in consideration tended to be wasting for valuable resources, however, importance of this study refer to following considerations:

- Its one of the pilot studies in Jordan that limit the extension needs for farmers in desert's area.
- The results of this study can be base for planning the future intervention in this area, to better planning for agricultural extension programs and it can be further developed in the future.
- The study might be used, as an example to be followed for developing an approach for farmers needs for agricultural extension and training in other regions of Jordan.

**Objectives of the study:** The goal of the study is to determine the training needs for male and female farmers in south deserts of Jordan and to suggest an appropriate extension approach that suite the area to establish an efficient curriculum for agricultural extension and training to have positive impact on the male and female farmers. Ultimate goals set have been as follow:

- Determining the general needs for male and female farmers for agricultural extension and training's.

- Determines needs the extension and training's in the following sectors: (plant and animal production, food processing and bee keeping)
- Determines needs the extension and training's for the activities of every sector.

**Study limits:** The study conducted within three limits, firstly: the geographical limits, secondly: the size of sample and thirdly: fields of agricultural extension and training. For geographical limits, (al-Hussainieh) in the south desert of Jordan. For the size of sample the study interviewed (80) male and female farmers. For the fields of training and extension the study is limited to the fields of plant and animal production, food processing and bee keeping.

## MATERIALS AND METHODS

**The study's region:** The region of study it's "Al-husaineah Region" in Ma'an governorate in south of Jordan.

**Method of needs assessments:** Despite the plenty of methods to identify needs of farmers', the most of previous studies and researches depend on farmers themselves because those farmers can be assessing these needs. However, the researcher depended on farmers themselves to identify their needs [2]. In addition to that and depending on the "theory of self personality" for Karl Rogers "individual considers the better source of information about him/her self", so he/she can identify what are his/her needs of extension and training better than using other methods. This is one of the researcher's reasons to rely on this method to identify the needs [3].

**Study's society and sample:** The study society includes 1500 men and women farmers. Random sample had been selected from the total number of Society was (80) men and women farmers. The sample had been divided into two groups: men and women.

**Method of data collection:** The researcher relies mainly on collecting field data from the farmers. For this purpose the researcher has designed questionnaire for interview includes number from questions:

**Firstly:** Personal and economical data such as age. Education level, the main career, the perspective toward extension work ....etc.

**Secondly:** Data to identify the training needs were it divided in four main categories each of these categories includes a number of fields as follow:

- Plant production: includes the fields of vegetables, crops and fruit trees
- Animal production: includes cattle, sheep and poultry
- Food processing: includes processing of cheese, tomato, pickling and jam.
- Bee keeping: includes some of knowledge and skills related to bee keeping.

The farmers' questionnaire includes (61) paragraph in the fields as follow: before this questionnaire used in field to test the reliability. Evaluation process by experts modified the questionnaire to be more efficient in addressing the demanded objectives. After that the process of data collection had started using the personal interview during the period from middle of April up to the middle of June 2005. The unsatisfactory questionnaires were excluded.

**Data analysis method:** After data collection, the data were purified and classified in organized tables according to study objectives. For assessment of needs, the average needs for training calculated through finding out the means for degrees, were (3) degrees given to the high need, (2) for medium need, (1) for low need and (0) for no need. The data analyzed using the statistical package for social science (S.P.S.S). Following statistical criteria have been used:

- Frequencies: used in description of numbers of researched samples
- Percentage: used in description of researched sample according to their distribution in the defined categories and levels for every variable.
- Averages: used to describe the numerical values for different variables

**RESULTS AND DISCUSSION**

Personal and professional characters for Men and Women Farmers.

Table 1: Distribution of interviewed men and women farmers in study' region

Sex			
Number	Women farmers	Men farmers	Total number
	40	40	80

Table 2: Distribution of men and women farmers according to age

Sex				
Age categories	Male		Female	
	Number	Percent	Number	Percent
Less than 35	10	25	12	30
35-50	20	50	20	50
More than 50	10	25	8	20
Total	40	100	40	100

Table 3: Distribution of men and women farmers according to education level

Sex				
Age categories	Male		Female	
	Number	Percent	Number	Percent
Illiterate	8	20	24	60
Elementary education	20	50	8	20
Secondary education	12	30	---	---
Graduates	---	---	8	20
Total	40	100	40	100

**Age:** The study shows that mostly half of the men and women farmers are aged between 35-50 years (Table 2) and this indicate their need for training and extension to develop their skills. Were the senses of responsibility at this age is very high and their willing to pay more attention for their future through developing their work is also high.

**Educational level:** The study shows that most of the farmers are illiterate or with primary education only (Table 3). This requires the extension workers not to rely much on written materials instead visual and broadcast materials should be used in delivering the extension messages for the farmers.

**Monthly income:** It was clear from the study that the main sources of income are plant production, animal

Table 4: Average monthly income for men farmers from different resources

Source of income	Number	Average	Standard deviation
Plant production	4	40.50	45.61
Animal production	14	192.86	238.82
Additional work	14	210.00	113.14
Retirement salary	16	145.63	45.57

Table 5: Distribution of men and women farmers according to time allocated for farming

Categories	Sex			
	Male		Female	
	Number	Percent	Number	Percent
Full time farming	24	60	34	85
Part time farming	16	40	6	15
Total	40	100	40	100

Table 6: Distribution of men and women farmers according member ship in local organizations

Age categories	Sex			
	Male		Female	
	Number	Percent	Number	Percent
Farmers union	---	---	---	---
Tell Burma Society	10	25	---	---
Suns of Southern Badia Society	2	5	---	---
Society of Khaled Bin - Alwaleed	2	5	---	---

Table 7: Distribution of men and women farmers according to reasons for not being members in farmers' Organizations

Reasons	Sex			
	Male		Female	
	Number	Percent	Number	Percent
Lack of knowledge	8	20	2	5
Being small farmers	---	---	---	---
No need for them	6	15	12	30
Low participation in its activities	---	---	4	10
Low interactions between farmers	---	---	---	---
Lack of willing	---	---	4	10
Lack of branches for these organizations	2	5	2	5
Out of the concern	4	10	---	---
Traditions prevent this	---	---	8	20

production, additional works and retirement salaries (Table 4). In general the study shows higher rate of income from animal production activities and this can guide the extension system for the most critical area to intervene.

**Time available for farming:** The study shows that more than half of the men and women farmers are full time farmers (Table 5). That is can it conclude that farming is main and sole source of income for majority of farmers in these regions. More extension and training programs should be planned to improve their skills in order to raise the farmers' incomes.

**Member in local organizations:** The study shows a low in the membership of local farmers' organizations. This due to many reasons detailed in Tables 6 & 7. Careful and continuous efforts should be paid to understand the reasons behind that to overcome the individuality and to organize the farmers in groups and organizations that might serve the goal of agricultural extension work.

**Sources of agricultural information's:** The study shows that the personal experience for men and women farmers is the first source that they rely on to face any situations or difficulties. Other sources vary as they illustrated in Table 8. This might indicate the weakness of agricultural extension in its current situation. Rely the farmers on their experience to obtain solutions for their problems might Constrains the lead to effective ways in farming.

**Availability resources of training:** The study shows that most farmers own televisions and radios (Table 9). This, means the possibility of use those two means in delivering proper extension programs to deal with problems that face the farmers. This might compensate some of the deficiencies in the number of extension workers and cover all the activities with little number of specialists.

**Agricultural problems:** The results of study show that plant infections and pests are the major threat for farmers, even the problems vary from one farmer to another as it illustrated in Table 10. This indicate the need to take this in consideration when preparing and planning the extension' programs and activities in order to deal with these problems according to their priorities.

**Place of the meeting with extension workers:** Most of farmers preferring meeting the extension workers in their

Table 8: Distribution of men and women farmers according to sources of information and knowledge

Information sources	Region			
	Male		Female	
	Mean*	Rank	Mean*	Rank
Extension Workers in the Region	1,55	6	1,33	6
Researcher from NCARTT	1	10	1	12
Private Agr. Companies	1,2	8	1,05	10
NGO's	1	10	1,02	11
Veterinary from MoA	2,1	2	1,9	2
Veterinary from Private Sector	1,4	7	1,25	8
Agr. Program in Jordan's Broad Cast	2	3	1,72	5
Agr. Program in Jordan's Television	1,75	5	1,78	3
Agricultural Extension Leaflets	1,4	7	1,27	7
Local newspapers	1,1	9	1,13	9
Other farmers	1,95	4	1,75	4
Personal experiences	2,85	1	2,87	1

\* the highest degree is (3)

Table 9: Distribution of men and women farmers according to availability of educational media for them

Media	Sex					
	Male			Female		
	Number	Percent	Rank	Number	Percent	Rank
Radio	38	95	1	26	65	2
Television	34	85	2	36	90	1
Satellite	10	25	4	14	35	3
Video	4	10	5	4	10	4
Phone	10	45	3	14	35	3

\* The highest degree is (3)

Table 10: Distribution of men and women farmers according to their exposures to Agricultural Technical Problems

Technical problems	Sex					
	Male			Female		
	Number	Percent	Rank	Number	Percent	Rank
Lack the knowledge of fertilizing	2	5	5	---	---	---
Poor soil	4	10	4	---	---	---
Infections and pests	6	15	3	12	30	1
Low level of experience In farming	4	10	4	2	5	2
Diseases of sheep	16	40	1	---	---	2
Lack of knowledge to proper keeping system for sheep	6	15	3	2	5	2
Sheep's infections	10	25	2	2	5	2

Table 11: Distribution of men and women farmers according to their favorite place for meeting the extension workers

Favorite place	Sex					
	Male			Female		
	Number	Percent	Rank	Number	Percent	Rank
The farm	40	100	1	35	87	1
Extension office	10	25	5	8	20	5
Farmer's home	20	50	4	25	62	3
Group meeting in farm	30	75	2	30	75	2
Group meeting in extension office	25	62	3	15	38	4

Table 12: Distribution of men and women farmers according to Participation in planning, attendance and evaluation of extension programs

Participation	Sex			
	Male		Female	
	Number	%	Number	%
Planning	2	4	2	4
Attendance	2	4	2	4
Evaluation	2	4	2	4

Table 13: Distribution of men and women farmers according to the nature of farming activities

Activities	Sex					
	Male			Female		
	Number	Percent	Rank	Number	Percent	Rank
Vegetables production	20	50	2	18	45	3
Fruits production	17	42	3	16	40	4
Crop production	20	50	2	22	55	2
Cattle raising	16	40	4	12	30	---
Sheep raising	24	60	1	22	55	2
Poultry keeping	12	30	5	6	15	5
Bees keeping	4	10	6	4	10	6
Food processing	---	---	---	36	90	1

farms as first choice then in their homes and in the extension offices (Table 11). This requires from the extension workers to take opinion the farmers in consideration. This might be helped many farmers are on survival in semi-desert areas and closed societies so; interview of the farmers in their places will encourage their participation and engagement in the extension work.

**The participation in extension programs:** The result of study shows the weakness of farmer's participation in planning and evaluating the programs of extension despite the high of farmers who attend the activities of these programs as it illustrated in Table 12.

This indicates the need of giving role to the farmers in planning and evaluation of these programs to ensure their effectiveness and suitability. The low participation of farmers in evaluation might indicate to weakness the system of extension in evaluation process as a whole.

**The nature of activity for farmers:** The results of study shows that the dominant farming activity for most of men and women farmers; is the animal production activity he is the first activity followed by plant production then bee keeping then the food processing for women farmers (Table 13). This indicates the importance the planning for extension programs related

Table 14: Training needs of men and women farmers in all fields

Fields	Sex			
	Male		Female	
	Mean*	Rank	Mean*	Rank
Plant production	1.26	4	1.83	1
Animal production	1.48	1	1.81	3
Bee keeping	1.33	3	1.82	2
Food processing	1.45	2	1.30	4

\* The highest degree is (3)

Table 15: Training needs of men and women farmers in plant production field

Fields	Sex			
	Male		Female	
	Mean*	Rank	Mean*	Rank
Vegetables	1.33	2	2.06	1
Crops	1.16	3	1.89	2
Fruit trees	1.84	1	1.59	3

\*The highest degree is (3)

Table 16: Training needs of men and women farmers in Animal production field

Fields	Sex			
	Male		Female	
	Mean*	Rank	Mean*	Rank
Poultry	1.61	1	1.82	2
Cattle	1.44	2	1.80	3
Sheep and goats	1.22	3	1.84	1

\*The highest degree is (3)

to these activities as well as increase in number of subject matter specialists in those fields.

**The training needs for male and female farmers:** This part of study discusses needs of the training in main fields of agricultural production, then it discuss in details the components of each of these fields and the third step is in-depth analyzing for needs of the training in every component from activities of the farming.

**Main training fields:** The study shows high need for training in east region for plant production activities of comparing to animal production and bee keeping activities (Table 14) this might explained the plant

production activities were are large size and requires many from work because the farmers cannot following all the farm activities rather than countering all the difficulties that might appear. While the farmers in the fields of animal production and bee keeping are engage in these activities all times of the year.

The Training needs in fields (plant production, animal production, bee keeping and food processing).

Plant production field includes; the vegetables, field crops and fruit trees activities, while animal production includes poultry, the sheep and the cattle. Bee keeping includes establishing hives, harvesting of honey, feeding, Inspection of hives, diseases and pests and other by-products.

Food processing activities includes only making of cheese, concentrates of tomato, Pickling and the Jam. these different activities will be discussed as follow:

**The training needs in plant production field (vegetables, field crops and fruit trees):** The study shows that the farmers' needs in east region for training on vegetables are higher than their needs in field crops and fruit trees (Table 15). This might indicate to the most of the work in vegetables with help from the family unlike the field crops and fruit trees were all of the family members are engaged in these activities. For this reason the training needs for the individual farmers are higher than that for the family as a whole. This also explains the other variations in the needs for training regarding the different activities.

**The training needs in animal production sectors (poultry, cattle and sheep):** The study results show that the training needs in poultry keeping are higher than that for sheep and cattle (Table 16). This might indicate to low level of farmer's knowledge on poultry sector as it new sector comparing to the other traditional sector (sheep and cattle). This creates knowledge gap in this field. Same explanations can be used to illustrate the other variations.

**Training needs in bee keeping field (establishing the hives, hives' inspection, etc.):** The study shows that the needs of training in the diseases and pests of bee are higher than that for other bee keeping activities (Table 17).

This partially due to low level of farmer's knowledge in bee keeping.

**Training needs in food processing for women farmers:** The study shows that the women farmers needs more training in the cheese processing activities more than

Table 17: Training needs of men and women farmers in bee keeping sector

Fields	Sex			
	Male		Female	
	Mean*	Rank	Mean*	Rank
Establishing the bee hives	1.45	2	1.95	1
Monitoring the bee	1.20	6	1.75	6
Inspection of hives	1.40	3	1.82	4
Honey harvesting	1.15	7	1.70	7
Bee' nutrition	1.35	5	1.80	5
Disease and pests of bee	1.47	1	1.85	2
Bees	1.38	4	1.82	3

\* The highest degree is (3)

Table 18: Training needs of women farmers in food-processing activities

Fields	Female	
	Mean*	Rank
Cheese making	1.42	1
Tomato pumice processing	1.30	3
Preparing of pickling	1.40	2
Jam processing	1.23	4

\* The highest degree is (3)

Table 19: Training needs of men and women farmers in vegetables field

Fields	Sex			
	Male		Female	
	Mean*	Rank	Mean*	Rank
Preparing land for planting	1.25	4	1.75	6
Timing of planting	0.95	8	1.60	7
Method of planting	1.22	5	1.55	8
Fertilizing	1.50	3	2.15	4
Irrigation methods	1.55	2	2.30	2
Crop service	1.20	6	2.18	3
Control of pests	1.90	1	2.45	1
Harvesting	1.10	7	2.10	5

\*The highest degree is (3)

Table 20: Training needs of men and women farmers in crop production field

Fields	Sex			
	Male		Female	
	Mean*	Rank	Mean*	Rank
Preparing land for planting	1.00	4	1.70	5
Timing of planting	0.95	6	1.55	7
Method of planting	1.10	3	1.57	6
Fertilizing	1.45	2	2.30	2
Crop service	0.75	7	1.85	4
Control of pests	2.05	1	2.40	1
Harvesting	0.98	5	1.90	3

\* The highest degree is (3)

other activities such as pickling, Jam, etc (Table 18). The reason behind that is the wide spread of cheese making all over the country and the competition in the market that promote the farmers to find the optimal way of cheese processing while other activities are limited and normally women are processing such products for home consumption not for marketing.

**The training needs in vegetables and field crops:** The study shows the highest need for training is in the diseases and pest control (Tables 19 & 20) this due mainly to the emergent diseases and enormous varieties of medicines that confuse the farmers in addition to the new pattern of planting - the intensive one - that is different from the traditional farming system. This also can explain the other variations in the study.

**The training needs in fruit trees:** The study results show that the training needs in the fertilizing is higher than that in other activities in fruit trees (Table 21). The reason might due to low interest of men and women farmers in fertilizing their fields either because their droughts about the benefits of fertilizer or because of high prices of fertilizers and this reflected in low level of knowledge about this topic.

**The training needs in poultry:** The need for training in Vaccination is the highest among all other topics related to cattle rising as it can be seen in Table 22. This might due to modern introduced notion of vaccination that related to intensive keeping systems that is not applied in the region of study comparing to the other topics of cattle rising. This explains the other variations for prioritizing the training needs in the different fields of rising for men and women farmers in region of study.

**The training needs in cattle:** The study indicated the high needs of farmers to training in udder inspection before milking (Table 23). The reason might due to the nature of this process that requires technical skills to prepare the material used in inspection that is not available for traditional farmers. This explains the other variations for prioritizing the training needs in the different fields of rising for men and women farmers in region of study.

**The training needs in sheep sector:** The study shows needs for training for the men and women farmers in feeding their flocks and controlling the diseases are higher than their needs in other areas as it illustrated in



Table 21: Training needs of men and women farmers in fruit trees field

Fields	Sex			
	Male		Female	
	Mean*	Rank	Mean*	Rank
Preparing land for planting	1.30	4	1.95	1
Timing of planting	1.10	7	1.55	5
Method of planting	1.20	5	1.45	6
Fertilizing	1.65	1	1.80	2
Irrigation	1.50	2	1.7	3
Pruning	1.40	3	1.65	4
Harvesting	1.15	6	1.05	7

\* The highest degree is (3)

Table 22: Training needs of men and women farmers in poultry sector

Fields	Sex			
	Male		Female	
	Mean*	Rank	Mean*	Rank
Poultry feeding	1.60	2	1.90	2
Poultry watering	1.55	4	1.65	4
Precautions for infectious	1.62	2	1.85	3
Vaccination	1.85	1	2.20	1
Poultry management	1.45	5	1.50	5

\* The highest degree is (3)

Table 23: Training needs of men and women farmers in cattle sector

Fields	Sex			
	Male		Female	
	Mean*	Rank	Mean*	Rank
Constructing the shelter	1.10	6	1.50	6
Cleaning the shelter	1.40	4	1.85	3
Conditions of milking	1.25	5	1.75	5
Testing the udder before milking	1.50	3	2.00	1
Cattle nutrition for better milk yields	1.75	1	1.90	2
Precautions for infection	1.65	2	1.80	4

\* The highest degree is (3)

Table 24: Training needs of men and women farmers in sheep and goats sector

Fields	Sex			
	Male		Female	
	Mean*	Rank	Mean*	Rank
Suitable place for constructing shelters	0.95	5	1.35	5
Farm management	1.05	4	1.45	4
Feed mixtures in different production stages	1.85	1	2.00	2
Sharing, dipping and pruning	1.10	3	1.97	3
Health and protection	1.70	2	2.35	1

\* The highest degree is (3)

Table 24. This might explained by the dominant traditional pattern of keeping that depend on continuous movement of flocks looking for range land and the limited time available for owners to look after the new knowledge. Same explanation can be given to other variations in needs for training on different topics related to sheep rising.

## CONCLUSIONS

Following are the main conclusions of the study:

- The results show that the training needs for male and female farmer are - in general - high. Most of farmers don't have enough information about their work. This indicates the clear need for extension and training. This requires from agricultural extension is planning training programs aiming at their capacities and enriches their information.
- During analyzing the training needs for farmers in different training fields, was clear that these needs are differed from one field to another despite their general need for new information and knowledge. The differences between fields of activities might refer to the changes in technical development in many agricultural fields, which make the farmers it very far to follow up every new invention or measure.
- When ranking the training needs for each field from the study fields according to the training needs, the farmers were vary in their personal experience. This might explain by lack of knowledge's and skills for men and women farmers. While the reason behind the selection of top priorities areas is might indicate to high number of farmers that are engaged in these activities comparing to the other activities in the same field.
- The study shows variations in needs according to sex. This due to the training opportunities un-equivalent between males and females, this reflect the differences in needs.
- Most of male and female farmers in region of study is full time farmers. This indicates the importance of agricultural sector as its one of the main works for most of farmers.
- The study pointed out that most of the farmers are in need for training and extension on all most fields and activities of the agricultural work in addition to the needs within each field from study fields. This indicates that training and extension

should deal with all mentioned needs according to the farmers' priorities that been identified in this study.

- Most of farmers not convinced in the farmers organizations. From this one might conclude importance of special efforts to activate the group work, though explaining importance of such organizations in the benefit of farmers. The real reasons for low turn on to these organizations should be researched and deal with.
- Most of farmers have the Televisions and radios and that means the importance of more extension programs through those means.  
The weak awareness for technical and non-technical information for the study society indicates the insufficient extension and training programs in the region of study.
- Most of farmers prefer meeting the extension workers in one of the farms either as individuals or groups. So, field visits for those farmers should be the base for extension activities
- The high degree of farmers expose to media facilitates their learning process, which might help in adopting the skills and knowledge learned through extension workers.
- The study shows significant differences in the training needs in Animal production field, vegetables and field crops for male and female farmers in the region of study. Also there were differences in the fruit trees and sheep activities for male farmers. So, planning the future extension and training program should take these results in consideration as special needs for this region.
- The Results of study show no differences in the needs for training in the following fields: total needs, animal production, bee keeping, food processing, cattle, poultry for male and female farmers. No differences also between female farmers in the fields of fruit trees and sheep. This might lead to conclude that importance of extension the farmers in region of study in all these fields.

### **RECOMMENDATIONS**

On light of study's results and conclusions, there are following recommendations:

- The training center in Extension Administration in Ministry of Agriculture should develop scientific plan and practical, dependent on the results of this

study. The required human resources those are aware of philosophy and objectives of extension work aiming at building farmers capacities.

- More regular field surveys aiming at specifying the needs of male and female farmers for different training programs to be satisfied from through planning and applying more focal training and extension programs.
- This study should be repeated on intervals to monitor the changes in needs and classify them in training groups according to needs.
- The Extension Administration might adopt the approach that suggested in this study, which, considers being appropriate for needs assessments in the field of agricultural extension and other related fields.
- The Extension Administration in the Ministry should provide the necessary extension workers for the fieldwork in different aspects of the study.
- More attention should be given to implementation of more from extension programs for farmers in different farming fields and according to the results of the study.
- The extension administration should adopt the recommended approach for this region that depends on planning, implementation and evaluation of extension programs after sufficient training for extension workers in the region.
- More attention should be paid the farmers to participate in farmers' organizations and some efforts should be directed toward these organizations to activate their performance and maximize their benefits for members to be good example for other farmers.

### **REFERENCES**

1. Kassim M. Al-Farhan, 1969. An analysis of the relationship between job performance of Iraqi Agricultural Extension Agents and Selected backgrounds and psychological factors. Ph.D. thesis, University of Wisconsin, pp: 4.
2. In English, 1962.
3. In English, 1971.